Application Serial No. 10/804,965
Amendment and Response dtd. 11/2/07
Response to Office Action of 8/6/07

Amendments to the specification:

1.   Please replace paragraph [0013] beginning on page 4 of the specification with the following amended paragraph:

[0013] Figure 1 depicts a flowchart of an embodiment of a method of this invention. Referring to Fig. 1, the initial data for the method of this invention includes an image of a substantially rectangular region of interest 20. The image of a rectangular region of interest may be obtained, but not limited to, by the methods and systems described in U.S. Patent Application publication No. US2003/0118236 A1. In the present invention, the edges of features interior to the rectangular region of interest are detected by an edge detection method (step 30, Fig. 1). Possible edge detection methods include, but are not limited to, gradient based methods, Laplacian based methods, Marr and Hildreth methods, and methods based on signal modeling (see, for example, J. S. Lim, *Two Dimensional Signal and Image Processing*, ISBN 0-13-935322-4, pp. 476-94). The detected edges are then culled in order to obtain a reduced edge group, where the reduced edge group includes a number of points (step 40, Fig. 1). Culling may be achieved, but not limited to, by masking a sub-set of the reduced edge group. Next, a number of candidate corner points are selected from the reduced edge group by applying a predetermined criterion. The predetermined criterion can include, but is not limited to, obtaining a measure of *cornerness* for each one point from the reduced edge group and comparing the measure of *cornerness* to a threshold (the measure of *cornerness* is also referred to as a measure of corner strength). Exemplary measures of *cornerness* include, but are not limited to, the measures defined by Beus and Tiu, Kitchen and Rosenfeld, Freeman and Davis, Rosenfeld and Johnston, Rosenfeld and Weszka, and Zuniga and Haralick. (Short explanation of these measures and references can be found in Dmitry Chetverikov and Zsolt Szabó, *Detection of High Curvature Points in Planar Curves*, available at ~~http://~~visual.ipan.sztaki.hu/corner/index.html and in Rachid Deriche, Girard Giraudon, *A computational approach for corner and vertex detection*, Int'l J. of Computer Vision, vol. 10, no. 2, pp. 101-124, 1993, available at ~~http://~~citeseer.nj.nec.com/ deriche92computational.html.) Other exemplary corner detection methods include, but are not

Application Serial No. 10/804,965
Amendment and Response dtd. 11/2/07
Response to Office Action of 8/6/07

limited to, the methods of Chetverikov and Szabo, and Dreschler and Nagel (also described in the above cited references). The region corner points are identified from the candidate corner points based on a predetermined relationship, such as a distance, between each candidate corner point and characteristic edge points, such as edge centers and corners, of the rectangular region of interest (step 60, Fig. 1).

II.   Please replace the Abstract which begins on page 20 of the specification with the following amended Abstract:

A method and system for detecting the corners of a region in an image.